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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/320,649	05/27/1999	NATSUHIKO MORI	100725-9009	5070

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ARENT FOX LLP
1050 CONNECTICUT AVENUE, N.W.
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WASHINGTON, DC 20036

EXAMINER

JOYCE, WILLIAM C

ART UNIT	PAPER NUMBER
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3656

NOTIFICATION DATE	DELIVERY MODE
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04/29/2010

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

DCIPDocket@arentfox.com
IPMatters@arentfox.com
Patent_Mail@arentfox.com

Office Action Summary	Application No. 09/320,649	Applicant(s) MORI ET AL.	
	Examiner William C. Joyce	Art Unit 3656	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 April 2010.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☐ Claim(s) 1-4,6-9 and 11-24 is/are pending in the application.
- 4a) Of the above claim(s) 11-22 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4,6-9,23 and 24 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☒ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

This Office Action is in response to the Election filed April 6, 2010 for the above identified patent application.

Election/Restrictions

1. Claims 11-22 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected species, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on April 6, 2010.

Information Disclosure Statement

2. The information disclosure statement filed August 16, 2005 fails to comply with 37 CFR 1.98(a)(2), which requires a legible copy of each cited foreign patent document; each non-patent literature publication or that portion which caused it to be listed; and all other information or that portion which caused it to be listed. It has been placed in the application file, but the information referred to therein has not been considered.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent

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granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 1-4, 6-9, and 23-24 are rejected under 35 U.S.C. 102(b) as being anticipated by Mori et al. (USP 5,941,646).

Mori et al. discloses a hydrodynamic type oil-impregnated sintered bearing, comprising: a porous bearing body (1) of sintered metal having a bearing surface opposed to a sliding surface of a rotating shaft (2) to be supported via a bearing clearance, and hydrodynamic pressure generating grooves slanting against an axial direction provided in the bearing surface; and lubricating oil or lubricating grease impregnated in pores inside the bearing body, wherein said lubricating oil or a base oil of said lubricating grease is a lubricating oil selected from among mixtures of poly- α -olefin or hydrogenated compound thereof and ester (for example, see line 32 of column 8 to line 27 of column 9).

Referring to Figure 1, Mori et al. illustrate a plurality of bearing surfaces are formed on an inner periphery of said bearing body and separated from one another by an endless circumferential groove, each of the bearing surfaces having said hydrodynamic pressure generating grooves and ridges bordered by said hydrodynamic pressure generating grooves, and, an inner diameter of said bearing body at the endless circumferential groove being greater than inner diameters at the ridges of the bearing surfaces.

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5. Claims 1-4, 6-9, and 23-24 are rejected under 35 U.S.C. 102(e) as being anticipated by Okamura et al. (USP 6,299,356).

Okamura et al. illustrates in Figure 23 a hydrodynamic type oil-impregnated sintered bearing, comprising: a porous bearing body of sintered metal having a bearing surface opposed to a sliding surface of a rotating shaft to be supported via a bearing clearance, and hydrodynamic pressure generating grooves slanting against an axial direction provided in the bearing surface; and lubricating oil or lubricating grease impregnated in pores inside the bearing body, wherein said lubricating oil or a base oil of said lubricating grease is a lubricating oil selected from among mixtures of poly- α -olefin or hydrogenated compound thereof and ester (for example, column 10, lines 61+), wherein a plurality of bearing surfaces are formed on an inner periphery of said bearing body and separated from one another by an endless circumferential groove, each of the bearing surfaces having said hydrodynamic pressure generating grooves and ridges bordered by said hydrodynamic pressure generating grooves, and, an inner diameter of said bearing body at the endless circumferential groove being greater than inner diameters at the ridges of the bearing surfaces.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

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invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 1-4, 6-9, and 23-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Takahashi et al. (USP 6,000,850) in view of Asada et al. (USP 5,504,637) and Miyasaka et al. (USP 5,746,516).

Takahashi et al. illustrates in Figure 1 a hydrodynamic type oil-impregnated sintered bearing (3), comprising: a porous bearing body of sintered metal having a bearing surface opposed to a sliding surface of a rotating shaft to be supported via a bearing clearance, and hydrodynamic pressure generating grooves (1) slanting against an axial direction provided in the bearing surface; and lubricating oil or lubricating grease impregnated in pores inside the bearing body.

Takahashi et al. does not disclose the lubricating oil/grease is a lubricating oil selected from among mixtures of poly- α -olefin or hydrogenated compound thereof and ester. The prior art to Asada et al. teaches a hydrodynamic device having the claimed lubricant (column 5, lines 19+). It would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the bearing of Takahashi et al. with the lubricant of Asada et al., motivation being to provide a lubricant having a predetermined oil flow and surface tension.

Takahashi et al. teaches a bearing arrangement having one bearing section (Fig. 1) and does not illustrate a bearing having multiple bearing sections separated by an endless circumferential groove. The prior art to Miyasaka et al. illustrates in Figure 3 a bearing arrangement having two bearing sections (5a) separated by a

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circumferential groove (5b), wherein the bearing arrangement with the circumferential groove provides low noise, less vibration and less cogging (column 6, lines 10+). It would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the bearing of Takahashi et al. with multiple bearing sections separated by a circumferential groove, as taught by Miyasaka et al. motivation being to provide a rotary shaft with increased radial support while having low noise, less vibration and less cogging.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to William C. Joyce whose telephone number is (571) 272-7107. The examiner can normally be reached on Monday - Thursday 7:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Ridley can be reached on (571) 272-6917. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/William C. Joyce/
Primary Examiner, Art Unit 3656